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**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

RED ROCK ANALYTICS, LLC,

Plaintiff,

v.

APPLE INC., QUALCOMM INC.

Defendants.

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NO. 6:21-CV-00346-ADA

**DECLARATION OF RAJIV VIJAYAN IN SUPPORT OF DEFENDANT QUALCOMM  
INCORPORATED’S MOTION TO TRANSFER VENUE TO THE NORTHERN  
DISTRICT OF CALIFORNIA**

I, Rajiv Vijayan, declare:

1. The facts set out below are based on my personal knowledge of, including my investigations into, the matters addressed below.

2. I am a Vice President of Engineering at Qualcomm Technologies, Inc. (“QTI”), which is a wholly-owned subsidiary of Qualcomm Incorporated (“Qualcomm”). QTI is the “chip-business” of Qualcomm which designs Qualcomm-branded semiconductor products. I joined Qualcomm’s office in San Diego, California in August, 1993. I currently work at Qualcomm’s office in San Diego, California, and reside in San Diego, California.

3. I understand that Red Rock Analytics, LLC (“Red Rock”) has filed a lawsuit against Qualcomm and Apple Inc. (the “Lawsuit”) on April 26, 2021.

4. It is my understanding that the products accused of infringement in the Lawsuit’s complaint (“Complaint”) include certain Qualcomm-branded products with a 5G transceiver (“Accused Qualcomm 5G Products”) and/or Wi-Fi 6 transceiver (“Accused Qualcomm Wi-Fi 6

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Products”) (collectively, “Accused Qualcomm Products”), which include the products listed in Exhibit A which is attached to this declaration.

5. It is my understanding that the allegations in the Complaint relate to calibration of I-Q imbalance for one or more of the following types of transceivers: 5G millimeter wave (“5G mm Wave”) transceivers, 5G sub-6 GHz (“5G sub-6”) transceivers, and Wi-Fi 6 transceivers.

**Activities in Qualcomm’s California Offices**

6. As Vice President of Engineering at QTI, my responsibilities include managing QTI’s Radio Frequency Platform and Interfaces (“RFPI”) technology team for Qualcomm-branded 5G products. The RFPI technology team within QTI is responsible for the research, design, and development of algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products, among other responsibilities.

7. Additional teams responsible for the research, design, and development (including implementation) of the algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products include the RF systems, RF software, modem firmware, modem hardware, RFIC, and Product Test Engineering (PTE) teams. Based on my own knowledge and based on my investigation, employees from these teams are based in Qualcomm’s Santa Clara and San Jose, California (“California Bay Area Offices”); San Diego, California offices; or outside of the U.S.

8. I have not identified any Qualcomm entity employees in the teams described in Paragraphs 6 and 7 as they relate to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products that are based in Austin, Texas, or Richardson, Texas or elsewhere in Texas.

9. I understand that the following individuals have knowledge that is relevant to algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm

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5G Products. These individuals are QTI employees with experience in one or more of the groups discussed in Paragraphs 6 and 7:

- a. Rahul Malik, Principal Engineer, Manager based in Qualcomm’s San Diego Offices, is part of the RFPI technology team that is responsible for the research, design, and development of algorithms and techniques relating to any calibration of I-Q imbalance related to 5G mmWave transceivers for the Accused Qualcomm 5G Products.
- b. Christos Komninakis, Senior Director of Technology based in Qualcomm’s San Diego Offices, was part of the RFPI technology team that is responsible for the research, design, and development of algorithms and techniques relating to any calibration of I-Q imbalance related to 5G sub-6 transceivers for the Accused Qualcomm 5G Products.

10. I understand that the RFPI technology team, the RF software team, and the modem firmware team design and develop software related to algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products.

11. I understand that the RF software team also develops documentation and tools to provide to customers related to the algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products.

12. The U.S.-based finance group for the Accused Qualcomm 5G Products is based in Qualcomm’s California offices in San Diego and San Jose. The group maintains sales data, forecasts, and other relevant financials for the Accused Qualcomm 5G Products.

**Activities in Qualcomm’s Texas Offices**

13. I understand that Qualcomm has an office located in Austin and another in Richardson, Texas.

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14. I also understand that Qualcomm does not have an office in Waco, Texas. QTI has one employee who works remotely from his residence in Waco, Texas. The employee works on a system-on-a-chip (SOC) architecture team that establishes standardized bus protocols and designs digital circuits in chipsets. This employee is not now and has never been part of the teams described in Paragraphs 6 and 7 and is not responsible for algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products.

15. As explained below, I understand that none of the employees in Qualcomm’s Austin office are responsible for algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products.

16. I understand that among the employees in Qualcomm’s office in Austin, Texas are members of the digital signal processor (DSP) team. The DSP team is not responsible for the research, design, and development of algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products. The DSP team develops and designs DSPs and is not responsible for writing software for or designing DSPs specific to calibration of I-Q imbalance for the Accused Qualcomm 5G Products.

17. I further understand that the other employees based in Qualcomm’s office in Austin are not responsible for the research, design, and development of algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products.

18. I understand that approximately 19 of Qualcomm’s and its related entities’ regular U.S.-based employees (including employees of QTI) work in Qualcomm’s Richardson office. I understand that no employees in Qualcomm’s Richardson office are responsible for algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products.

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19. I understand that among the employees in Richardson, Texas are employees who assist the Radio Frequency Integrated Circuit (RFIC) team. The Richardson employees who assist the RFIC team joined QTI in 2019. I understand that the employees who assist the RFIC team based in Richardson, Texas are not responsible for algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products.

20. I further understand that the other employees based in Qualcomm’s office in Richardson are not responsible for the research, design, and development of algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products.

**Location of Documents Related to Accused 5G mmWave and sub-6 Technologies**

21. I understand that documentation and other materials related to the algorithms and techniques relating to any calibration of I-Q imbalance for the Accused Qualcomm 5G Products are generated by employees in Qualcomm’s California Bay Area Offices or San Diego Offices, where the teams described in Paragraphs 6 and 7 for 5G are based. Additionally, such documents and other materials are stored on servers, or stored locally in computers or available in hard copy at Qualcomm’s California Bay Area Offices or San Diego Offices.

**Qualcomm Employees Identified by the First Amended Complaint**

22. It is my understanding that Red Rock’s June 30, 2021 First Amended Complaint attaches an exhibit that cites to several patents and publications that have contributors or inventors who are QTI employees, including U.S. Patent Publication No. 2020/0029345 (“the ’345 Publication”).

23. It is my understanding several contributors on the publication described in Paragraph 22, above, are employed by QTI at Qualcomm’s offices in Qualcomm’s California Bay Area offices, or in San Diego, California. Specifically, Rahul Malik, Jong Hyeon Park, Udara


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Fernando, Alexei Yurievitch Gorokhov, Nan Zhang, Junsheng Han, Scott Hoover, and Ruhua He, are eight of the inventors named on the '345 Publication.

24. To my knowledge, none of the contributors to the publication described in Paragraph 22, above, are employed by Qualcomm or its related entities at any of Qualcomm’s offices within the State of Texas.

25. I declare under penalty of perjury that the foregoing is true and correct.

Executed on August 16, 2021

/s/   
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Rajiv Vijayan